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| <p align="center">EMERGENCY SERVICES DIVISION</p> <p align="center">BROOKHAVEN NATIONAL LABORATORY</p> | | <p>Procedure No: FR-SCBA-9.0.4</p> <p>Revision No: 2</p> <p>Page 1 of 3</p> |
| <p>Title: REFILL OF SCBA BREATHING AIR CYLINDERS</p> | | |
| <p>1.0 <u>PURPOSE:</u> This procedure applies to refilling S.C.B.A. breathing air cylinders.</p> <p>The breathing air cylinders are refilled from a breathing air compressor located in Fire/Rescue Headquarters Building 599, by Firefighters trained in pressure equipment procedures and safeguards. Breathing air shall meet at least the requirements of the specification of Grade D breathing air as described in Compressed Gas Association Commodity Specification G-7.1-1966.</p> <p>2.0 <u>RESPONSIBILITIES:</u> Working with high pressure air is dangerous. The operator of the filling station is responsible for taking all precautions to ensure personal safety.</p> <p>3.0 <u>DEFINITIONS:</u> None.</p> <p>4.0 <u>PREREQUISITES:</u> 4.1 Check pressure and hydrostatic test date of cylinders to be filled. (If any cylinder is past hydrostatic test date, IT SHOULD NOT BE REFILLED). See FR-1.3.5 for hydrostatic test of cylinder. 4.2 Cylinder should be in good physical condition. Any questionable cylinders shall not be recharged.</p> | | |
| <p>PREPARED BY: C. LaSalla</p> <p>_____</p> <p>Author/Date</p> | <p>REVIEWED BY: M. Carroll</p> <p>_____</p> <p>Chief/Date</p> <p>J. Vaz</p> <p>_____</p> <p>Division QAO/Date</p> | <p>APPROVED BY: F. Marotta</p> <p>_____</p> <p>Division Manager/Date</p> <p>EFFECTIVE DATE: <u>06-01-01</u></p> <p>REVIEW CYCLE: 3 years</p> |
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| | <p>Page 2 of 3</p> |

5.0 **PRECAUTIONS:**

- 5.1 Eye and ear protection should be worn when running compressor or while filling cylinders
- 5.2 When compressor is in "ON" position, it will cycle on and off as needed. Do not open front cage of filling station unless main compressor switch is in "OFF" position.
- 5.3 Cylinders should be handled carefully when charged and stored properly. The potential for mass energy release exists if the valve is dislodged or cylinder is punctured.

6.0 **PROCEDURE:**

- 6.1. The following compressor check is to be carried out before start up.

- 6.1.1 Check the oil level in the crankcase. Open cage door in front for access to oil fill. The full level is indicated when the oil is at the top of the filler aperture (red cap). The danger level is when the oil is below the bottom of the short dipstick on the underside of the filler cap.
- 6.1.2 Top off the crankcase if necessary with Eagle Compressor Oil #17-500. Log the amount of oil used in the Compressor Log Sheet.
- 6.1.3 Place the initial settings for air control. Panel valves on the Eagle Air Compressor as follows:
 - a) Storage bank valves #1 & 2 - on
 - b) Charging hose valve (SCBA) - off

6.2 **Fill Storage Bank:**

- 6.2.1 Turn all air control panel valves to the OFF position.
- 6.2.2 Turn ON compressor, storage banks 1 and 2 will fill automatically to 6000 PSI and then compressor will turn off.

6.3 **SCBA Filling Procedure**

- 6.3.1 Slide down front access door to expose cylinder-holding sleeves.
- 6.3.2 Move tilt lever upward to tilt cylinder sleeves for loading
- 6.3.3 Place 1, 2, or 3 cylinders in sleeve holders
- 6.3.4 Connect airline fill hose to each cylinder being filled and open the cylinder valve.
- 6.3.5 Return cylinder rack to upright position and slide up door to closed position
- 6.3.6 Turn both bank valves 1 & 2 to "ON" position
- 6.3.7 Adjust regulator knob to proper pressure indicated for the cylinders being filled.
Example: SCBA 4500 psi
- 6.3.8 Slowly open the "FILL" valve while monitoring the "SCBA" gauge. Cylinders should be filled slowly to avoid excessive heat. The cylinder or cylinders will begin to fill and stop filling when regulator pressure is reached.

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| | <p>Page 3 of 3</p> |

- 6.3.9 The compressor will restart to recharge main banks when pressure goes below 5800 psi in Banks 1 and 2.
- 6.3.10 When cylinders reach proper pressure turn off "FILL" valve
- 6.3.11 Open front access door and tilt out cylinders
- 6.3.12 Close cylinder valves and move "Bleed" valve to "ON" position. This will remove air pressure from air line fill hoses.
- 6.3.13 Remove air line fill hoses from cylinders
- 6.3.14 Remove cylinders from Eagle Air system and place in storage racks
- 6.3.15 Return all valves to "OFF" position, close access door
- 6.3.16 Place main "ON, OFF" switch to AUTO OFF position. This will shut down compressor after proper cool down period 1 to 2 minutes.

7.0 **IMPLEMENTATION AND TRAINING**

None – this is part of each firefighter's probationary training.

8.0 **REFERENCES:**

- 8.1 Compressed Gas Association Commodity Spec. G-7.1
- 8.2 Eagle Air Systems BP8 Manual

9.0 **ATTACHMENTS**

None